

Work Order ID 152467

Monday, October 24, 2016 11:41:47 AM

152467

Page 1

Item ID: D3529-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw

Start Date: 10/12/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 10/24/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

DAS
21
9-89

Date:

OCT 24 2016

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3529

Rev A

110

0.00

110

FLOW WATER JET

Waterjet

Memo

0.06

FLOW CNC Waterjet

CUT BLANK AS PER FILE D3529-1BLANK

2 16/10/24

120

0.00

120

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.18

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining 2-Machine as per
Folio FA645 and Dwg D35293-Deburr2 16/11/09
DAS
33
9-89

130

QC2- Inspect parts off machine FAI/FAIB

0.00

130

QC

Memo

0.00

Quality Control

2 16/11/09
DAS
33
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

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Page 2

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC8- Inspect parts - second check	0.00							
140						<u>2</u>	<u>0</u>		DAS 20 16-11-10 9-89
QC	Memo	0.01							
Quality Control									
150	Identify as per dwg & Stock Location: <u>7 454</u>	0.00							
150									NOV 1 1 2016
Packaging	Memo	0.00							DAS 6 9-89
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									DAS 21 9-89
QC	Memo	0.03							NOV 1 1 2016
Quality Control									

DAS
21
9-89

NOV 1 1 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____				
Misidentified ☐	☐	Past Due ☐					

Picklist Print

Monday, October 24, 2016 11:41:47 AM

Page 1

Work Order ID: 152467

152467

Parent Item: D3529-1

D3529-1

Parent Item Name: Bearpaw

Start Date: 10/12/2016

Required Date: 10/24/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 06-06-28 JLM
IPP Rev:B New Manufacturing Method 08-11-27 Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased		No		100	sf	454.0000	1.265	2.663158			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

Deile 10/24

Location

Loc Qty

Loc Code

MAT

40

m135497

40

MAT018

414

m135013

14

m135913

400

3.7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DART AEROSPACE LTD		Work Order:	152467
Description: Bearpaw		Part Number:	D3529-1
Inspection Dwg: D3529 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

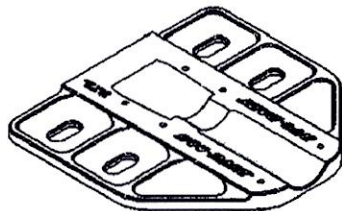
Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	5.50	+/-0.030	5.500	✓			
B	0.07 x 45°	+/-0.030 x 0.5°	0.070 x 45°	✓			
C	R0.25	+/-0.030	0.250	✓			
D	0.250	+/-0.010	0.253	✓			
E	0.625	+/-0.010	0.630	✓			
F	0.950	+/-0.010	0.960	✓			
G	1.63	+/-0.030	1.630	✓			
H	12.14	+/-0.030	12.140	✓			
I							
J	5.70	+/-0.030	5.700	✓			
K	0.375	+/-0.010	0.380	✓			
L	0.525	+/-0.010	0.525	✓			
M	0.13 x 45°	+/-0.030 x 0.5°	0.130 x 45°	✓			
N	R0.50	+/-0.030	0.500	✓			
O	12.76	+/-0.030	12.760	✓			
P	3.38	+/-0.030	3.380	✓			
Q	3.75	+/-0.030	3.750	✓			
R	5.187	+/-0.010	5.187	✓			
S	5.25	+/-0.030	5.250	✓			
T	7.13	+/-0.030	7.130	✓			
U	Ø0.260	+0.006/-0.001	0.260	✓			
V	0.30	+/-0.030	0.310	✓			
W	0.93	+/-0.030	0.930	✓			
X	1.30	+/-0.030	1.30	✓			

Measured by:	33 9-89	Audited by:	20 9-89	Prototype Approval:	N/A
Date:	16/11/09	Date:	16-11-10	Date:	N/A

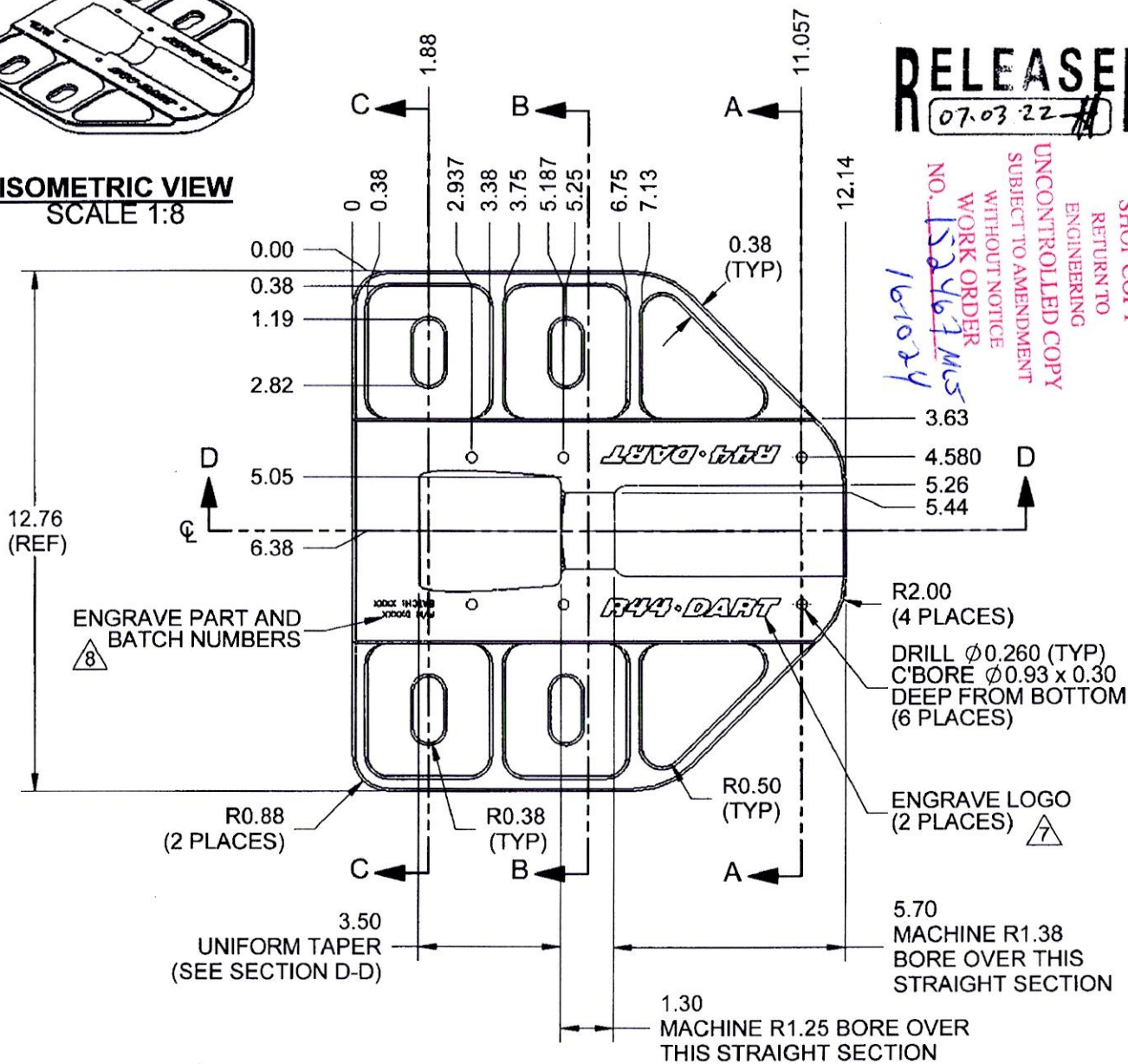
Rev	Date	Change	Revised by	Approved
A	07.05.01	New Issue	KJ/JLM	
B	08.05.06	Dimension I removed	KJ/DD	

DART

DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3529
DATE 07.01.04	TITLE R44 BEARPAW	REV. A SHEET 1 OF 2
REV A	DATE 07.01.04	DESCRIPTION NEW ISSUE



ISOMETRIC VIEW
SCALE 1:8



D3529-1 R44 BEARPAW

NOTES:

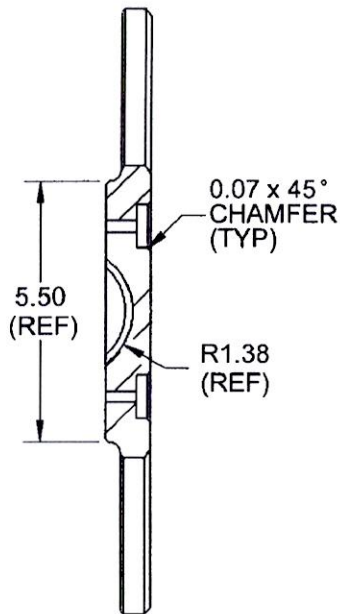
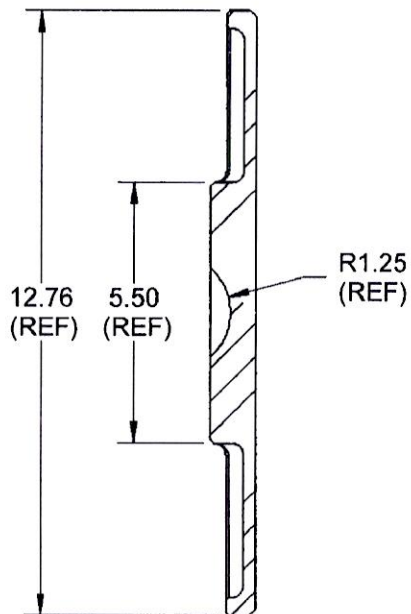
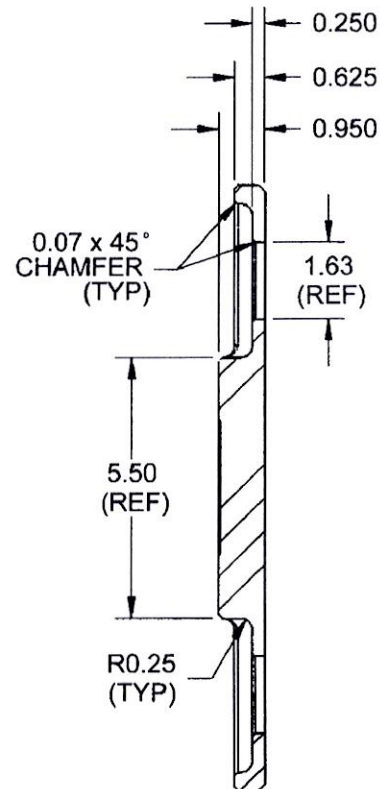
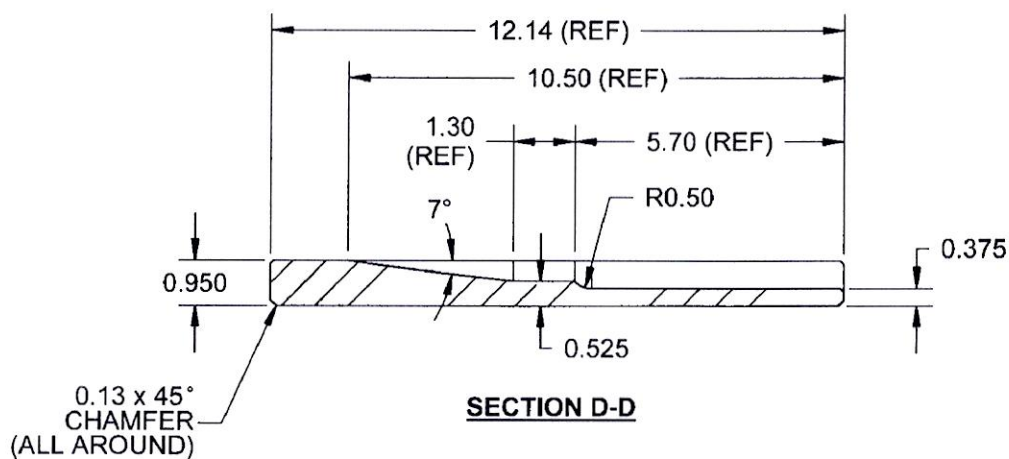
- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.00 THICK (MACHINE TO 0.950)
- 2) FINISH: NONE
- 3) PART IS SYMMETRIC ABOUT ϕ
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
- 7) ENGRAVE LOGO TO MAX DEPTH OF 0.012 AT LOCATION SHOWN
- 8) ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010 AT LOCATION SHOWN

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DART

DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3529	REV. A SHEET 2 OF 2
DATE 07.01.04		TITLE R44 BEARPAW	SCALE 1:4

RELEASED
07.03.22**SECTION A-A****SECTION B-B****SECTION C-C****SECTION D-D****COPYRIGHT © 2007 BY DART AEROSPACE LTD**

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